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the founder with the progressive advances of Astronomy. Those who are knowing to her very many and wise subventions of astronomical research (a few of which are spoken of in these *Publications*),* will welcome this, her latest gift, for personal as well as for scientific reasons. The Society is to be congratulated that Miss BRUCE has selected it as the Trustee to carry out her generous desires. If the trust is executed, as it will be, with intelligence, fidelity and circumspection, the time will soon come when the BRUCE medal will be one of the most highly-prized recognitions of original and useful service to Astronomical Science.

EDWARD S. HOLDEN.

THE LICK OBSERVATORY, April 6, 1897.

RETURN OF THE LOWELL OBSERVATORY TO ARIZONA.

"The Lowell Observatory has not found the site in the vicinity of the City of Mexico as favorable as had been expected, and will be moved back to Flagstaff, Arizona."†—*Science*, March 26, 1897, page 512.

THE CAPE PHOTOGRAPHIC *DURCHMUSTERUNG*‡

In 1885, Dr. GILL commenced a photographic survey of the southern heavens from eighteen degrees of South Decl. to the south pole. The observations have been made at the Cape, and the measures and many of the reductions by Dr. KAPTEYN, in Holland. The negatives were made with a DALLMEYER lens of six inches aperture and fifty-four inches focus, and the exposures (thirty to sixty minutes) are chosen so as to include all stars as bright as the tenth magnitude. Each plate covers thirty-six square degrees. The epoch of the Catalogue is 1875.0; and the probable errors of the positions are $0^s.27$ and $2''.6$ in R. A. and Decl. respectively.

The (photographic) magnitudes are deduced so as to make the mean photographic magnitude of a group of stars identical with the mean visual magnitude. The average number of stars per square degree is 25.4, and the absolute number varies from

* Vol. II, p. 307; Vol. V, p. 82; Vol. V, p. 186; Vol. VIII, p. 243; Vol. IX, No. 55 (BRUCE Telescope, Moon maps, etc.)

† See *Mountain Observatories*, 1896, page 66.

‡ The first volume of this work (-19° to -37°), containing 152,000 stars, is printed. The second volume (-38° to 52°), containing 158,000 stars, is in the press.

six to more than one hundred. In ARGELANDER's *Durchmusterung*, the average number is 15.2, in SCHOENFELD's it is 18.5, and in the Cordoba D. M. (-22° to -42°) it is 56.1. —Abstract of a paper in the *Monthly Notices R. A. S.*, Vol. LVII, p. 297.

INTERNATIONAL CATALOGUE OF FUNDAMENTAL STARS.

In May, 1896, a Conference was held at Paris at the invitation of the *Bureau des Longitudes*, to consider a plan for the formation of a fundamental catalogue of standard stars for the ephemerides published in France, England, Germany, and America. The personnel of the Conference was Messrs. AUWERS (Germany), BACKLUND (Russia), BAUSCHINGER (Germany), CHRISTIE (England), DOWNING (England), GILL (Cape of Good Hope), LOEWY (France), NEWCOMB (United States), TISSERAND (France). M. FAYE (France) acted as President, and Messrs. v. d. S. BAKHUYSEN (Holland) and TRÉPIED (France) served as Secretaries. The conclusions of the Conference were adopted with practical unanimity. The most important were as follows: For the fundamental catalogue, the equinox should be determined solely from observations of the Sun, excluding those of *Mercury* and *Venus*. The equinox of Professor NEWCOMB's system (N_1) in Vol. I of the *Astronomical Papers of the American Ephemeris* was adopted.* In view of the uncertainty that still exists with regard to the numerical value of the personal error depending on magnitude, which affects the R. A., it was decided that corrections for such errors should *not* be applied. But as the existence of such (small and systematic) errors is undoubted, the Conference considered that observatories should make researches to fix their amounts. Professor NEWCOMB was entrusted with the duty of fixing the values of the precessions to be employed. The Conference decided to adopt the following constants: Nutation, $9''.21$;† Aberration, $20''.47$;‡ Solar Parallax, $8''.80$.§ It was decided that in the reduction of mean places of stars to apparent, the term of short period in R. A. (f') depending on twice the Moon's longitude should be omitted for both polar and equatorial stars.

* Catalogue of 1098 stars.

† Dr. GILL's determination = $9''.207 \pm 0''.003$.

‡ From the adopted solar-parallax and the NEWCOMB-MICHELSON value of the velocity of light there results $20''.467 \pm 0''.012$.

§ Dr. GILL's determination (heliometer) $8''.802 \pm 0''.005$.